

ABSTRACT OF THE DISCLOSURE

Disclosed herein is a magnetic powder which can provide magnets having excellent magnetic properties and having excellent reliability especially excellent heat stability. The magnetic powder is composed of an alloy composition represented by $R_x(Fe_{1-a}Co_a)_{100-x-y-z}B_yM_z$ (where R is at least one kind of rare-earth element excepting Dy, M is at least one kind of element selected from Ti, Cr, Nb, Mo, Hf, W, Mn, Zr and Dy, x is 7.1 - 9.9at%, y is 4.6 - 8.0at%, z is 0.1 - 3.0 at%, and a is 0 - 0.30, and the magnetic powder being constituted from a composite structure having a soft magnetic phase and a hard magnetic phase, wherein when the magnetic powder is mixed with a binding resin and then the mixture is subjected to compaction molding to form a bonded magnet having a density ρ [Mg/m³], the maximum magnetic energy product $(BH)_{max}$ [kJ/m³] of the bonded magnet at a room temperature satisfies the relationship represented by the formula $(BH)_{max}/\rho^2$ [$\times 10^{-9} Jm^3/g^2$] 2.40, and the intrinsic coercive force H_{CJ} of the bonded magnet at a room temperature is in the range of 400 - 750 kA/m.

09871600-053101
TOTES0-00912860